

Discussion Topics

04/28/2014

TopPlate/Cooling

- Adapt to existing top plate or make new one for experimental setup
 - One set feedthru position for rotation
 - From cryostat center R-193mm +7.5-8° off axis of rotation. (will change due to larger gear)
- Do we supply Temperature sensor feedthru, and heater feedthru?
 - Are we adapting to existing sizes?
- Experiment hanger redesign for adaptation?
- Cooling requirements (heat from setup)
 - Hand calculation: ~20W overall heating
 - From simulation: ~23W
 - Temp differential in LAr ~5-7K
 - Run at “high” pressure?
 - Super-cool?
 - LAr purity not a concern

Readout and Control

- Heater
 - Power supply?
 - 9 lines (2wires/line) w/ variable output settings
 - Estimated max required voltage ~35V
 - Heater designed for 115V
 - Monitor both voltage and current to calculate the power
 - Feedthru?
 - MDC Vacuum part# 9132006 (20 pins 2.75” feedthru in stock)
 - Air side connector has 20day lead time (delivered last week of May)
- Temperature
 - Feedthru
 - Connectors?
 - DAQ hardware?
 - Software program to record temperatures
 - Arno Straessner’s student starting in May?
 - Calibration?
 - Designed under the assumption CERN provides temperature readout hardware.
 - What is the computer interface?

Assembly and shipping

- Stuff HexCell into gaps in Cu absorbers.
 - Where to get HexCell?
- How much assembly should be done prior to shipping?
 - Ship fully assembled so just have to connect to top plate and make connections?
- Ship by date?
 - May 30?
 - Heaters have 5 week lead time.
 - Estimated delivery May28-29?
 - Parts manufacturing timeline = 3 weeks from start
- Assembly/user instructions?
 - Includes:
 - Any assembly needed to be done at CERN
 - Setup prior to running
 - Any information relevant to data collection/running